

Joby Aero, Inc.

File Number: 1961-EX-ST-2021

Correspondence Reference Number:66747

**1- The “Request for STA” file has the following verbiage “Prior to operating, Joby will monitor the band to determine whether the band is available for use”. Please provide the concept or mechanism to monitor the band as stated.**

#### Monitoring Mechanisms

There are two mechanisms that will be used to monitor the 400 MHz and 2.2 GHz bands:

1. Manual scanning of the bands using an RF Spectrum analyzer at the ground control station (“GCS”)
2. Automated link quality assessment between the GCS and the all-electric vertical take-off and landing (“EVTOL”) airplane prior to each flight

#### Timing

Manual scanning has or will occur:

- In December 2021 at multiple candidate terrestrial GCS locations
- At the final GCS location once determined (after completing coordination with the FAA and receiving all regulatory and permitting approvals)
- Daily prior to the first flight on any day

#### Technical Details

Manual scanning details:

- All Joby 400 MHz and 2.2 GHz band radios, including both air and ground sides, will be in the OFF state during the manual scans, in order not to obscure reception of possible non-Joby transmissions.
- For 400 MHz, Joby is using two ground-to-air 25 KHz channels only and will select channels based on the absence of other use. Scans will be 10 minutes in duration, Trace Mode = Peak Hold - Max, Detector = RMS. Absence of other use is defined as a no signal detected within each 25 KHz channel, measured to be greater than -80dBm in a 3 KHz RBW.
- For 2.2 GHz, Joby is using two 20 MHz channels (2200-2220 MHz and 2268-2278 MHz). Scans will be 10 minutes in duration, Trace Mode = Peak Hold - Max, Detector = RMS. Absence of other use is defined as a no signal detected within each 20 MHz channel, measured to be greater than -80dBm in a 30 KHz RBW.

Automated link quality assessment occurs as part of the pre-flight checklist prior to each flight. The EVTOL airplane will not be permitted to take off unless all links are of sufficient quality.

**2- The “Request for STA” file has the following verbiage “The STA will aid Joby in the testing and development of new technology of potential future benefit to the public”. Please elaborate the specific technology that is being tested and developed as the band 2200-2290 MHz is allocated exclusively for Fed Government and the band 420-450 MHz is allocated secondary for Non Fed Amateur service with restriction per US footnote US270 (e.g., require prior coordination with USSF at Peterson AFB). If the STA is to support a federal contract, please provide the Fed POC info for the contract**

#### About Joby - Potential Future Benefit to the Public

Joby Aviation, Inc. is a California-headquartered transportation company developing EVTOL aircraft which it intends to operate as part of a fast, quiet, and convenient air taxi service beginning in 2024. The aircraft, which has a maximum range of 150 miles on a single charge, can transport a pilot and four passengers at speeds of up to 200 mph. It is designed to help reduce urban congestion and accelerate the shift to sustainable modes of transit.

#### STA - Specific Technology Being Tested and Developed

Joby’s vision is for piloted air taxi service. Our flight test operations today, however, are remotely piloted. Multiple redundant links are used across multiple spectrum bands to support safe real-time telecommand and telemetry reporting. Each spectrum band has unique propagation characteristics and capacity. For our short demonstration flights across the San Francisco Bay, we expect that 400 MHz will provide the highest resilience for telecommand, while 2.2 GHz will afford large bandwidth for telemetry and high-resolution sensor data. These telemetry/telecommand functions are only used for unmanned flight testing of the Joby aircraft and are not intended for operational use which will be piloted. Thus, the operational configuration for the Joby aircraft will not include transmitting in the 400 MHz or 2.2 GHz bands. As this is a new operational environment for Joby, we expect to grow our technical knowledge from these flights.

#### Federal Contract

The STA is in support of USAF contract *FA8002-20-9-0143 Mod 04*. The POC for this contract is Michael DeRespini and can be reached at (559) 469-7044 or michael.derespinis@afwerx.af.mil.